Harris County Flood Control District: Continuous Updates Program

Full Mitigation Best Practice Story

Harris County, Texas

Harris County, TX - The Harris County Flood Control District (HCFCD), a Cooperating Technical Partner (CTP) in association with the Federal Emergency Management Agency (FEMA), recently completed a countywide Flood Insurance Study (FIS) restudy for Harris County, Texas (Houston, Texas). This restudy resulted in the modeling and floodplain delineation of 22 major watersheds and approximately 1,300 miles of channels using HEC-HMS and HEC-RAS. The new floodplain maps became effective on June 18, 2007.

Harris County, Texas is a growing community with a highly active floodplain-related development. Presently there are many Letter of Map Changes (LOMC), consisting of both a Conditional Letter of Map Revisions (CLOMR) and Letter of Map Revisions (LOMR), in the queue at FEMA. These map revisions will be approved in the near future and will change the models and floodplains within Harris County. Furthermore, additional CLOMRs and LOMRs will be submitted to FEMA in the future by local floodplain managers and consultants. With the vast number of LOMRs and CLOMRs, maintaining the models into the future by considering all the map revisions is a considerable challenge. HCFCD has developed a solution to properly manage the models into the future on a continuous basis. This program is called “continuous updates.”

The goal of continuous updates is to manage a master set of current and accurate hydrologic and hydraulic models and their supporting data for watersheds in Harris County. These models are developed and maintained to:

1. Support the Flood Control District’s planning and project development activities,

2. Provide local communities an understanding of flood risk [e.g., FEMA’s National Flood Insurance Program (NFIP)], and

3. Provide the development community with realistic tools to assess and plan development projects.

HCFCD has become engaged in the management of the effective models and associated data; these activities are outlined in Mapping Activity Statement (MAS) No. 14. In order to accomplish the objective outlined above, HCFCD shall be the custodian of the model sets and supporting data. The items in MAS No. 14 are as follows:

1. HCFCD development of Modeling Management Standards to ensure consistent products.

2. HCFCD development of a web-based application to distribute, notify, and check models and supporting data.

3. Continuous updating of the FEMA effective model set by incorporating recently approved LOMRs into the master model set, which then can be distributed to the community through HCFCD's web-based application.

HCFCD will distribute the models to the community through HCFCD's Model and Map Management (M3) System. The community will use the recently established M3 System to check out the effective models. With the establishment of the M3 System, three items have been developed as part of the M3 system:

1. Standards: The model development and management standards have been developed to standardize the methodologies and assumptions used for hydrologic and hydraulic modeling within Harris County and to preserve the integrity of the effective FEMA models.

2. Model Check-Out and Check-In: For check-out, the user will identify a desired study area, select the appropriate models and supporting data (FEMA effective) for that area, and generate a request for the retrieval and delivery of that data. For check-in, the web portal will provide the end user with tools to submit models and supporting data, provide additional information regarding the status of the study, and require the proper organization of the submitted information. The tracking of projects through the model check-out and check-in process will begin so that HCFCD will be able to track the potential changes to the models.

3. Notification: The system will actively track the status of a study from the time of check-out through either the ultimate check-in of revised models or the expiration of the study. The system will send notification to the end user if any overlapping study is initiated or if models are submitted for any overlapping studies.

With these activities outlined above, the goal of continuous updates, which is to manage a master set of current and accurate hydrologic and hydraulic models and their supporting data, can be obtained with these models easily accessed by the community through the M3 system.

Activity/Project Location

Geographical Area:	**Single County (County-wide)**
FEMA Region:	**Region VI**
State:	**Texas**
County:	**Harris County**

Key Activity/Project Information

Sector:	**Public**
Hazard Type:	**Flooding; Hurricane/Tropical Storm**
Activity/Project Type:	**Education/Outreach/Public Awareness; Cooperative Technical Partner Activity**
Activity/Project Start Date:	**06/2007**
Activity/Project End Date:	**Ongoing**
Funding Source:	**Local Sources**
Funding Recipient Name:	**Harris County Flood Control District**

Activity/Project Economic Analysis

Cost:	**$1,500,000.00 (Estimated)**
Non FEMA Cost:	

Activity/Project Disaster Information

Mitigation Resulted From Federal Disaster?	**No**
Value Tested By Disaster?	**No**
Repetitive Loss Property?	**No**

Reference URLs

Reference URL 1:	**http://www.hcfcd.org/M3/**

Reference URLs

Main Points

No Main Points were entered.